Review of: "A Robust Assessment of the Local Anisotropy of the Hubble Constant"

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Potential competing interests: No potential competing interests to declare.

Manuscript Number: UUBMYH

Title: A robust assessment of the local anisotropy of the Hubble constant

In this manuscript, the author relied on one of the famous tensions that have been coming up from recent observations for the early and late universe for Hubble parameters in the LCDM model. There are some considerable criticisms related to the current version of the draft which should be clarified before any recommendation. Therefore, the authors should invest more time to consider my following comments.\\

My comments: \\

1. A main criticism is that one cannot recognize eventually what the added value of this draft for H0 tension is. In other words, the prediction of LCDM for SNIa data with what value of H0 has been given, and what about the comparison with that given by Planck observations. The author should indicate how their own approach can reduce or remove the inconsistency of best fit values for H0 when the CMB is considered and when the late-time observation is considered. In the current draft, a Whisker plot for measuring H0 should be added, and accordingly, the main results for the best fit value of H0 for late-time observations such as SNIa and early-time observations such as the CMB power spectrum are illustrated [e.g., Fig. (1) of Di Valentino, Eleonora, et al. "In the realm of the Hubble tension—a review of solutions." Classical and Quantum Gravity 38.15 (2021): 153001].
2. The second comment is that the title of the manuscript never reflects what is really given in the bulk of the draft. According to my experience, when such a phrase is written in a paper, the directional analysis of e.g., cosmological parameters is supposed to be done [e.g., see Bonvin, Camille, Ruth Durrer, and Martin Kunz. "Dipole of the luminosity distance: a direct measure of H (z)." Physical review letters 96.19 (2006): 191302; Jones, Joann, et al. "The Universe is not statistically isotropic." arXiv preprint arXiv:2310.12859 (2023).]. While, there is no proper computational analysis that can show the preferred direction is coming from a robust analysis based on the proposed pipeline. Therefore, the title is totally misleading.
3. The author mentioned in the abstract, “These results seem robust, since they are also obtained with a simple, single-parameter tired-light model,” while there is not any fact or quantitative evaluation for this claim throughout the draft. Indeed, there is not any solution for the H0 tension at all in this manuscript.
4. The author also wrote that “ΛCDM predictions become also consistent with both low and high redshift supernova data when the low redshift ones come from an area of the sky whose center is roughly 30◦ above the direction of the CMB

dipole (Fig. 3).” For this statement, there is not any quantitative analysis comparing to other directions or scanning various directions and reporting the relevant results to support this claim.

5. The references for trying to resolve or reduce the so-called Hubble tension in this paper are considerably incomplete. Looking in the literature, various approaches related to model building and even considering the data reductions and systematic noise, etc., would appear. The author should take care to cite them in the proper place of their own manuscript. As illustration [Poulin, Vivian, et al. "Early dark energy can resolve the Hubble tension." Physical review letters 122.22 (2019): 221301; Perivolaropoulos, Leandros, and Foteini Skara. "Challenges for ΛCDM: An update." New Astronomy Reviews 95 (2022): 101659; Schwarz, Dominik J., et al. "CMB anomalies after Planck." Classical and Quantum Gravity 33.18 (2016): 184001.]
6. The same criticism is for the cosmological principle and the isotropy and homogeneity principle. For example, [Aluri, Pavan Kumar, et al. "Is the observable Universe consistent with the cosmological principle?" Classical and Quantum Gravity 40.9 (2023): 094001]
7. The references, particularly for large-scale structure properties, are too old, and there is no signature of most recent papers for this idea.
8. The tired-light model has been examined extensively, and nowadays, many alternative models can predict more consistent results for an extended range of redshifts. I cannot be convinced that this model has the potential for considering the reduction of the H0 tension. If somebody is going to demonstrate it, they should also represent the prediction of the CMB power spectrum by this model.

End of my comments